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(54) Title: **PHARMACEUTICAL COMPOSITIONS AND METHODS FOR TREATING MULTIDRUG RESISTANT CANCER**

(57) **Abstract:** The invention relates to a pharmaceutical composition comprising i) ketotifen or an analog thereof and ii) a chemotherapeutic drug subject to multi-drug resistance by P-gp, such as doxorubicin or an analog thereof. The pharmaceutical composition is useful for treating cancer. The pharmaceutical composition is also useful for i) preventing or treating multi-drug resistance in a subject or ii) preventing a chemotherapeutic drug subject to multi-drug resistance by P-gp induced cardiac tissue damage in a subject, such as doxorubicin or an analog thereof. The invention relates to a pharmaceutical composition comprising i) ketotifen or an analog thereof and ii) a chemotherapeutic drug subject to multi-drug resistance by P-gp, such as doxorubicin or an analog thereof. The pharmaceutical composition is useful for treating cancer. The pharmaceutical composition is also useful for i) preventing or treating multi-drug resistance in a subject or ii) preventing a chemotherapeutic drug subject to multi-drug resistance by P-gp induced cardiac tissue damage in a subject, such as doxorubicin or an analog thereof.

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